WHAT IS CLAIMED IS:

1. A method of classifying an instance into one or more classes selected from a set of potential classes, comprising:

   selecting from the set of potential classes a subset of two or more classes to which the instance is determined to most likely belong; and

   applying to the instance a scrutiny classifier generated from a set of training records corresponding to a class set inclusive of the selected subset of classes to identify at least one class to which the instance most likely belongs.

2. The method of claim 1, wherein the subset of classes is selected based upon assignment to each of the potential classes a probability estimate of the instance belonging to the class.

3. The method of claim 2, wherein the selected subset of classes consists of a preselected number of potential classes having highest assigned probability estimates.

4. The method of claim 2, wherein the selected subset of classes consists of a number of potential classes having highest assigned probability estimates and a cumulative assigned probability estimate exceeding a preselected threshold.

5. The method of claim 2, wherein the probability estimates are assigned to each potential class by applying to the instance a ballpark classifier generated from a set of training records corresponding to the set of potential classes.

6. The method of claim 5, wherein the ballpark classifier is generated by a Naïve Bayes inducing algorithm.

7. The method of claim 1, wherein the subset of classes is selected based at least in part upon a prescribed misclassification cost.

8. The method of claim 1, wherein the scrutiny classifier is generated by a Naïve Bayes inducing algorithm.

11

3   9.   The method of claim 1, wherein the scrutiny classifier is generated by a

4   decision tree inducing algorithm.

1   10.   The method of claim 1, further comprising generating the scrutiny

2   classifier from the set of training records.

1   11.   The method of claim 10, wherein the scrutiny classifier is generated on-

2   the-fly from a set of training records corresponding to the selected subset of classes.

1   12.   The method of claim 10, wherein the scrutiny classifier is generated

2   beforehand in anticipation of the instance to be classified.

1   13.   The method of claim 12, wherein the scrutiny classifier is generated

2   based upon an occurrence probability estimate for the inclusive class set.

1   14.   The method of claim 13, further comprising selecting an inclusive class

2   set encompassing the selected subset of classes from which to generate the scrutiny

3   classifier.

1   15.   The method of claim 1, further comprising applying to the instance a

2   classifier generated from a set of training records corresponding to two or more

3   classes identified by the scrutiny classifier to identify at least one class to which the

4   instance is determined to most likely belong.

1   16.   A system for classifying an instance into one or more classes selected

2   from a set of potential classes, comprising:

3   a ballpark classifier configured to select from the set of potential classes a

4   subset of two or more classes to which the instance is determined to most likely

5   belong; and

6   a scrutiny classifier configured to identify from the selected subset of classes

7   at least one class to which the instance most likely belongs.

1   17.   The system of claim 16, wherein the ballpark classifier is generated

2   from a set of training records corresponding to the set of potential classes.

1   18.   The system of claim 16, wherein the scrutiny classifier is generated
2   from a set of training records corresponding to a class set inclusive of the selected
3   subset of classes.

1   19.   The system of claim 18, wherein the scrutiny classifier is generated on-
2   the-fly from a set of training records corresponding to the selected subset of classes.

1   20.   A computer program residing on a computer-readable medium for
2   causing a processor executing the computer program to classifying an instance into
3   one or more classes selected from a set of potential classes, the computer program
4   comprising instructions to:
5   select from the set of potential classes a subset of two or more classes to
6   which the instance is determined to most likely belong; and
7   apply to the instance a scrutiny classifier generated from a set of training
8   records corresponding to a class set inclusive of the selected subset of classes to
9   identify at least one class to which the instance most likely belongs.